UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,955	06/02/2000	Stephen Francis Bush	RD-26,450/USA	5231

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER
WONG, BLANCHE

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/584,955	BUSH, STEPHEN FRANCIS
	Examiner	Art Unit	
	Blanche Wong	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 November 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,2,4-18 and 20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>14-18 and 20</u> is/are allowed.

6)☒ Claim(s) <u>1,2,4-13</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>04 November 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   **Claims 1,2,4-12** are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

With regard to cl. 1, ln. 7-8, it is unclear how the active node is dynamically

reconfigurable to include a step of adapting said network layer for at least one of

internet protocol and asynchronous transfer mode protocol, or whether the active node

is dynamically reconfigurable to adapt said network layer for at least one of internet

protocol and asynchronous transfer mode protocol.

3.   Claim 1 recites the limitation "dynamic reconfiguration" in ln. 7. There is

insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 1,2,4-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mitchell (U.S. Pat No. 6,529,706) in view of Falk et al. (U.S. Pat No. 6,580,716).

With regard to cl. 1, Mitchell discloses a communication network (aircraft satellite communications system, Fig. 2 and 3), comprising:

a plurality of nodes including at least one earth station 280,284;230 (back-channel and ground stations; network operations center NOC); and

at least one spacecraft 250 (aircraft), wherein said spacecraft comprises an active node 270,271,250 (aircraft network server in aircraft) of said network and wherein the active node is dynamically reconfigurable (dynamic allocation, col. 6, ln. 8; a core set of programming is typically delivered to the aircraft regardless if requested or not by a client computer, col. 6, ln. 11-13; some webpages are replaced automatically, col. 6, ln. 16) to support open system interconnection (OSI) modeled communication (Programming and web browsers are applications. Applications are L7 and Internet application uses TCP/IP of L2 and L3 of OSI.), and wherein said active node includes a network layer conforming to the OSI reference model (it is inherent that there are 7 layers, including a network layer, of OSI) and dynamic reconfiguration includes adapting said network layer for at least one of internet protocol (web browsers and internet application).

However, Mitchell fails to explicitly show asynchronous transfer mode protocol.

In an analogous art, Falk discloses a processing satellite as part of distributed ATM switching (ATM network 100 includes UET, processing satellite and NOC, col. 3, ln. 22-24.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include ATM protocol. The suggestion/motivation for doing so would have been to provide for a distributed ATM networking that include satellites. Falk, col. 2, ln. 50-52. Therefore, it would have been obvious to combine Falk with Mitchell for the benefit of ATM protocol, to obtain the invention as specified in cl. 1.

With regard to cl. 2,4,5, it is inherent that there are the 7 layers of OSI.

With regard to cl. 6, Mitchell further discloses said active node 270,271,250 (aircraft network server in aircraft) comprises a node operating system (nodeOS) (it is inherent that there is an operating system within the aircraft network server) and at least one execution environment (EE) (it is inherent that programs and applications are executed by the operating system).

With regard to cl. 7, Mitchell further discloses terrestrial data link (ground station 284 connected to PSTN 290, col. 7, ln. 36-37).

With regard to cl. 8, Mitchell further discloses a PSTN 290 (col. 7, ln. 36-37).

With regard to cl. 9, Mitchell further discloses a wireless data link (communication via radio 281 is inherently wireless; client computer 272 communicates with aircraft network server 271 wirelessly 275; microwave link, col. 7, ln. 65).

With regard to cl. 10, Mitchell further discloses earth station 230 (NOC) is

configured to transmit (NOC sends the Internet service and other data services to a

satellite, col. 5, ln. 57-58; the satellite is used with the aircraft, col. 5, ln. 48-49) at least

one object to said active node 270,271,250 (aircraft network server in aircraft).

With regard to cl. 11, Mitchell further discloses TCP/IP (Internet uses TCP/IP, col.

3, ln. 61-62).

With regard to cl. 12, Mitchell further discloses ATM (it is inherent that the

switching center 293 connects to the Internet 210 via ATM).

With regard to cl. 13, Mitchell discloses a method for dynamically configuring

(dynamic allocation, col. 6, ln. 8; a core set of programming is typically delivered to the

aircraft regardless if requested or not by a client computer, col. 6, ln. 11-13; some

webpages are replaced automatically, col. 6, ln. 16) a spacecraft 250 (aircraft) to

function as an active node 270,271 (aircraft network server) of a communications

network (aircraft satellite communications system, Fig. 2 and 3), the method comprising:

transmitting an object (push mode - a core set of programming is typically

delivered to the aircraft regardless if requested or not by a client computer, col. 6, ln. 11-

13) from an earth station to said spacecraft, said object comprising at least one method

for configuring said spacecraft to include a node operating system (it is inherent that

there is an operating system within the aircraft network server) and at least one

execution environment (it is inherent that programs and applications are executed by

the operating system) and wherein said spacecraft is dynamically reconfigurable

(dynamic allocation, col. 6, ln. 8; a core set of programming is typically delivered to the

aircraft regardless if requested or not by a client computer, col. 6, ln. 11-13; some

webpages are replaced automatically, col. 6, ln. 16) to support open system

interconnection modeled communication (Programming and web browsers are

applications. Applications are L7 and Internet application uses TCP/IP of L2 and L3 of

OSI.), and wherein said active node includes a network layer conforming to the OSI

reference model (it is inherent that there are 7 layers, including a network layer, of OSI)

and dynamic reconfiguration includes adapting said network layer for at least one of

internet protocol (web browsers and internet application).

However, Mitchell fails to explicitly show asynchronous transfer mode protocol.

In an analogous art, Falk discloses a processing satellite as part of distributed

ATM switching (ATM network 100 includes UET, processing satellite and NOC, col. 3,

ln. 22-24.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to include ATM protocol. The suggestion/motivation for doing so would

have been to provide for a distributed ATM networking that include satellites. Falk, col.

2, ln. 50-52. Therefore, it would have been obvious to combine Falk with Mitchell for the

benefit of ATM protocol, to obtain the invention as specified in cl. 13.

Allowable Subject Matter

6.   **Claims 14-18,20** are allowed.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

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November 13, 2005

CHI PHAM
UPERVISORY PATENT EXAMIN
11/14/05